

Reagents of CK-MB

R₁ (buffer & coenzymes)	R₂ (enzymes):
Imidazol	ADP
Glucose	AMP
Acetyl cysteine	G₆PDH
Mg-acetate	Creatine Phosphate
NADP	Hexokinase (HK).
EDTA.	Anti-human CK-M



Principle of CK-MB

- A specific antibody inhibits the M subunits of CK-MM and CK-MB and thus allows determination of B subunit of CK-MB (assuming the absence of CK-BB or CK- I). CK-B catalytic concentration, which corresponds to half of CK-MB concentration, is determined from the rate of NADPH formation, measured at 340 nm, by means of the hexokinase (HK) and glucose-6-phosphate dehydrogenase (G6PDH) coupled reaction 1, 2.



• Creatine Phosphate + ADP $\xrightarrow{\text{CK}}$ Creatine + ATP

• ATP + Glucose $\xrightarrow{\text{HK}}$ ADP + glucose- γ -phosphate

• Glucose- γ -phosphate + NADP⁺ $\xrightarrow{\text{G}\gamma\text{PDH}}$ γ -
Phosphogluconate + NADPH + H⁺



procedure

×) ml W.R + 0.1 μ serum.

- mix and incubate 3 min and read initial absorbance
- start the stop watch and read after 1, 2, 3 min
- calculate $\Delta A / \text{min}$



calculations

- $\Delta A / \text{min} \times \text{CK} = \text{U/L}$

Normal value:

- 1 % of total CK
- Up to 20 U/L

